Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte QIXU DAVID CHEN, LIJI HUANG,
CHARLES LEU and RAJIV YADAV RANJAN

Appeal No. 2003-1801
Application 09/559,347

ON BRIEF

Before GARRIS, PAK, and DELMENDO, ***Administrative Patent Judges***.

GARRIS, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 2, 3, 8, 9, 11, 12, 17, 18 and 21-25, which are all of the claims remaining in the application.

The subject matter on appeal relates to a longitudinal or perpendicular magnetic recording medium comprising a glass or glass-ceramic substrate comprising lithium, a sealing layer comprising substantially amorphous NiNb directly deposited on the substrate and a magnetic layer, wherein the sealing layer has a thickness of about 450Å or less and substantially prevents migration of lithium from the substrate to the magnetic layer. The appealed subject matter also relates to a method of manufacturing such a magnetic recording medium. This appealed subject matter is adequately illustrated by independent claim 21, which reads as follows:

21. A longitudinal or perpendicular magnetic recording medium comprising, in this order:

a glass or glass-ceramic substrate comprising Li:

a sealing layer comprising substantially amorphous NiNb directly deposited on the glass or glass-ceramic substrate; and

a magnetic layer,

wherein the sealing layer has a thickness of about 450Å or less and substantially prevents migration of Li from the substrate to the magnetic layer of the magnetic recording medium.

The prior art set forth below is relied upon by the examiner in the rejections before us:

Okumura et al. (Okumura)	5,480,733		Jan. 2, 1996
Chen et al. (Chen '370)	5,733,370		Mar. 31, 1998
Taguchi et al. (Taguchi)	5,874,376		Feb. 23, 1999
Ross et al. (Ross)	5,980,997		Nov. 9, 1999
Chen et al. (Chen '890)	6,120,890		Sept. 19, 2000
		(filed	Nov. 5, 1998)
Starcke et al. (Starcke)	6,183,828	B1 Feb.	6, 2001
		(filed May	20, 1998)
Huang et al. (Huang)	6,416,881	B1 July	9, 2002
		(filed May	15, 2000)

The admitted prior art described on pages 4 and 6 of the subject application.

All of the appealed claims stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of Chen '890 in view of Ross.

Claims 2, 11, 18 and 21-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ross in view of Starcke and Taguchi, and the remaining appealed claims stand correspondingly rejected over various combinations of these references and the other prior art listed above.

We refer to the Brief filed January 14, 2003 and Reply Brief as well as to the Answer for a complete exposition of the

opposing viewpoints expressed by the appellants and by the examiner concerning the above-noted rejections.

OPINION

None of these rejections can be sustained.

Regarding the § 103 rejection, it is the examiner's basic position that it would have been obvious to modify the magnetic recording medium (and the corresponding method of manufacturing such a magnetic recording medium) of Ross in such a manner as to yield a magnetic recording medium (and corresponding method) of the type here claimed and that the medium (and method) resulting from this modification would inherently possess the here-claimed property of substantially preventing migration of lithium from the substrate to the magnetic layer of the magnetic recording medium. According to the appellants, the examiner's obviousness conclusion is the result of improperly substituting a retrospective view of inherency for some teaching or suggestion which supports the selection and use of the various elements in the particularly claimed combination. ***In re Newell***, 891 F.2d 899, 901, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989). As argued by

the appellants, this is because no actual prior art product possesses their claimed property of preventing lithium migration. It is only a hypothetical product resulting from the examiner's proposed modification of Ross that would even arguably possess this characteristic. The appellants urge that the examiner's proposed modification of Ross is based upon impermissible hindsight knowledge of the subject specification teaching that the here-claimed sealing layer of substantially amorphous NiNb substantially prevents migration of lithium from the substrate to the magnetic layer. In this latter regard, the appellants emphasize that obviousness cannot be predicated on what is unknown such as the migration prevention feature under consideration which the examiner characterizes as "inherent." ***In re Rijckaert***, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). We share the appellants' viewpoint on this matter.

The teachings of the applied prior art must be selectively chosen and combined in numerous respects in order to result in a magnetic recording medium which even arguably possesses, under the principles of inherency, the feature of substantially preventing migration of lithium from the substrate

to the magnetic layer. Specifically, the substrate of Ross must be replaced with a glass or glass-ceramic substrate comprising lithium. Second, NiNb must be chosen from patentee's many embodiments as the layer to be deposited on this replacement substrate. Third, the NiNb layer must be deposited directly onto this substrate pursuant to yet another of the alternative embodiments disclosed by Ross. Fourth, the layer must be deposited to a thickness within the here-claimed range, the obviousness of which is highly questionable at best.[1] From our perspective, this picking, choosing and combining of multiple selected teachings in the applied prior art are the consequence of impermissible hindsight rather than motivation, suggestion and

[1] This is because the examiner's obviousness conclusion regarding thickness is based on the proposition that thickness is a result effective variable and that it would have been obvious to determine optimum values for such a variable, pursuant to ***In re Woodruff***, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) and ***In re Boesch***, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). However, the thickness of Ross' NiNb layer is result effective for a purpose (i.e., laser texturizing) which is completely unrelated to the appellants' claimed purpose of preventing migration of lithium from the substrate to the magnetic layer. Contrary to the examiner's inappropriate assumption, optimizing thickness for the former purpose would not necessarily yield thicknesses appropriate for the latter purpose, that is, thicknesses within the here-claimed range.

teaching derived from the references under consideration. ***See W.L. Gore & Assoc., Inc. v. Garlock, Inc.***, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984).

In addition to the foregoing, even if the applied references were combined in the manner proposed by the examiner, we cannot agree with the examiner's determination that the magnetic recording medium resulting from this combination would inherently possess the feature of substantially preventing migration of lithium from the substrate to the magnetic layer of the modified recording medium of Ross. This is because we discern merit in the position expressed in the Brief and in the § 1.132 Declaration by Ross, filed September 12, 2002, to the effect that the laser texturizing procedure, which is performed on the NiNb layer pursuant to the teachings of the Ross patent, might well destroy any lithium-migrating prevention characteristic this layer might otherwise have inherently possessed. In essence, the examiner has dismissed this argument by assuming that the texturized NiNb layer of the modified recording medium of Ross would inherently prevent lithium migration and by

challenging the appellants to prove the contrary.

For at least two reasons, the examiner has improperly shifted to the appellants the burden of submitting such proof. First, as correctly argued by the appellants, the examiner's inherency and burden-shifting position was improper in the first instance since it related to a completely hypothetical recording medium. The authorities cited by the examiner in support of his position involve actual, not hypothetical, prior art products, and it is indisputable that the prior art recording medium of Ross does not inherently possess a lithium-migrating prevention property (i.e., because patentee's substrate does not contain lithium). Second, the examiner's aforementioned position is improper with respect to a texturized layer of the type taught by Ross since there is absolutely no evidence in the record before us which supports a determination that such a texturized layer would be capable of preventing lithium migration.

Under the circumstances discussed above, we determine that none of the § 103 rejections advanced by the examiner on this appeal can be sustained.

We also cannot sustain the examiner's obviousness-type double patenting rejection. According to the examiner, it would have been obvious to replace the amorphous NiP sealing layer of Chen's claimed magnetic recording medium with an amorphous NiNb layer of the type taught by Ross "since one of ordinary skill in the art would recognize that NiP and NiNb are known equivalents and the substitution of known equivalents is within the knowledge of one of ordinary skill in the art" (Answer, page 6). However, Ross contains no teaching or suggestion that NiP and NiNb are "known equivalents" (***id.***) for the purpose of performing a sealing function and in particular with respect to substantially preventing the migration of lithium from the substrate.[2] For this reason, the examiner's obviousness conclusion lacks evidentiary support.

[2] At most, Ross would have suggested replacing NiP with NiNb for the purpose of providing patentee's texturizing function. As previously indicated, this texturizing function is unrelated to the lithium-migrating prevention function performed by Chen's sealing layer and by the here-claimed sealing layer.

SUMMARY

The decision of the examiner is reversed.

REVERSED

BRADLEY R. GARRIS Administrative Patent Judge	)	
CHUNG K. PAK Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ROMULO H. DELMENDO Administrative Patent Judge	)	

BRG:psb

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